

AMENDMENTS TO THE CLAIMS

1.–54. (Cancelled)

55. (Previously presented) In a method for generating a composition of sets of contiguous overlapping peptide fragments (COPs) comprising the entire amino acid sequence of the allergen for a selected polypeptide allergen the improvement comprising carrying out the steps of:

(1) determining candidate contiguous overlapping peptides by a method comprising:

(a) conducting a structural analysis of the selected polypeptide allergen to identify alpha helix and beta sheet three-dimensional structural formations;

(b) selecting one or more separation sites within the sequence of the polypeptide allergen to provide candidate sets of contiguous overlapping peptide fragments comprising the entire amino acid sequence of the allergen said fragments being from 30 to 90 peptides in length which are linear and which peptides overlap each separation site wherein said COPs present potential T-cell epitopes but not alpha helix and beta-sheet structural motifs such that the overlapping peptide fragments do not bind or weakly bind IgE; and

(2) producing said candidate sets of contiguous overlapping peptide fragments; and

(3) screening said candidate sets of COPs by the steps of:

(a) selecting sets of COPs characterized by having a T cell stimulating activity for T cells specific for the selected polypeptide allergen which is greater than a selected minimum by contacting said sets of COPs with T cells specific for the selected polypeptide allergen and detecting said T cell stimulating activity; and

(b) selecting sets of COPs characterized by having an IgE binding activity for IgEs reactive with the selected polypeptide allergen which is less than a selected maximum by contacting said sets of COPs with IgEs reactive with said selected polypeptide allergen and detecting said IgE binding activity by *in vitro* and *in vivo* tests.

56. (Previously presented) The method of claim 55 in which the sets of COPs have relatively reduced levels of IgE binding activity but conserved T cell stimulating activities relative to the IgE binding and T cell stimulating activities of the allergen.

57. (Previously presented) The method of claim 55 wherein the peptides overlap each separation site by 10 to 15 amino acid residues.

58. (Previously presented) The method of claim 55 wherein said sets of COPs have a T cell stimulating index which is greater than 2.

59. (Previously presented) The method of claim 55 wherein said sets of COPs are useful in inducing tolerance to said polypeptide allergen.

60. (Previously presented) The method of claim 59 wherein the sets of COPs are useful in desensitization immunotherapy.

61. (Previously presented) The method of claim 55 in which the IgE binding activity *in vitro* is measured by immunoblotting.

62. (Previously presented) The method of claim 61 wherein the immunoblot is a dot blot.

63. (Previously presented) The method of claim 55 wherein the IgE binding activity is measured *in vivo* by a skin prick test or an intradermal test.

64. (Canceled)

65. (Previously presented) The method of claim 63 wherein the intradermal test is an immediate intradermal (ID) test wherein sets of COPs are selected which have a wheal diameter less than or equal to 5 mm at a peptide concentration of greater than 0.1 µg/ml and no flare reaction.